Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NURSING CARE FOLLOWING OPERATIONS ON SPINAL CORD AND BRAIN

By G. M. Dwyer, R.N.

Supervisor of Nurses, Neurological Institute, New York

This paper is based on observation of cases during the past eight years at the Neurological Institute of New York. It is essential that nurses desiring to specialize in this work should have had previously a good general surgical training and we would advise also a special study of the anatomy and physiology of the brain and spinal cord.

When one has mastered the art of making the patient comfortable, turning him with the least possible discomfort,—not allowing pressure sores to develop, she will find these cases intensely interesting. I know of nothing more like a "miracle" than the improvement, following the removal of a tumor from the spinal cord. Possibly the patient has been unable to walk for months or weeks or has been able to walk with a great deal of difficulty, owing to weakness or spasticity of the limbs. The first signs of returning sensation, the first movements of toes or fingers, are certainly gratifying results.

General Preparation for Spinal Cord Operation: Cathartic at bedtime; enema in the morning; a light breakfast of toast and coffee, if the operation does not take place until afternoon,—if earlier, no breakfast.

Local Preparation: Shave the spine if necessary and if the incision is to be in the lumbar region, shave around the anus. After the patient is on the table, give a final scrubbing with alcohol, ether, and paint with iodine.

Dressings: We usually protect dressing of gauze with a folded towel and rubber tissue strapped on with broad bands of adhesive, particularly if the incision is in the lower dorsal or lumbar region. We also use a straight abdominal binder, in preference to a bandage around the body, as it is more easily adjusted should the patient suffer from distension, as they frequently do in these cases. The patient is then wrapped in hot blankets, removed to the ward, and placed on an air or water bed, flat on his back, with one pillow under his head until he has reacted from the ether. If the site of operation has been in the upper cervical region, the head is immobilized by a splint and sand bags for some days. The patient should not be turned for the first eighteen to twenty-four hours, but should be carefully raised from the bed for rubbing and powdering of buttocks and lower spine. A very tight draw sheet, allowing no wrinkles to develop under the patient, should be used and care should be taken that crumbs do not remain in the bed. Hot water bottles are *never* used. Blankets are heated and changed at intervals should the patient show symptoms of shock. Murphy drip is frequently given (unless the patient has paralysis of the rectum) should the patient's condition warrant it. (Normal saline at a temperature of 110 degrees, given very slowly, per rectum, until the condition improves.) The pulse and respiration are watched carefully. These patients are very likely to develop pressure sores if utmost care is not given. We believe that if given proper care these will not develop.

After the first twenty-four hours, the patient may be carefully turned from side to side, the back being always carefully supported with hair pillows from the back of the neck to below the waist line. In cases where the patient is much emaciated, we have even turned them over on the abdomen a few days after operation. Frequent massaging of the back, buttocks, and lower limbs is necessary. Merely rubbing the surface with alcohol, and powdering, are not sufficient. These patients frequently have loss of sensation and poor circulation. Every time one is turned, he should be rubbed vigorously with the palm of the hand and alcohol, and powder applied; occasionally an oil rub is beneficial, as the skin becomes very dry from the application of alcohol. In the protection of the heels, we have found that raising the limbs on pillows from the ankles up, and allowing the feet to hang over, is preferable to the small rubber or cotton rings which are very difficult to keep in position. For drop foot, we have found that a light bedroom slipper with flexible leather sole and a proper adjustment of straps and buckles to keep the foot in position is very comfortable and practical. The right angle splints are a little more likely to cause pressure sores and are much more trouble to adjust.

Nurses should always bear in mind the fact that it is much easier to allow a pressure sore to develop than to heal it after it has developed; besides it lessens the patient's chances of recovery. We have seen them develop over night, because the patient's position had not been changed, or the back rubbed, and weeks of care did not cause it to heal. For the same reason hot water bottles are not used with these cases. They are very easily burned, owing to loss of sensation, and these burns will oftentimes not heal and will develop into ulcers. Hypodermics should not be given in paralyzed limbs.

Many of these spinal cord cases suffer extremely from distension, especially if the site of operation is in the lower dorsal region. Owing to the handling of the cord and the consequent shock to the nervous system, peristalsis apparently ceases for a time and distension, discomfort, and often even vomiting develop. Apparently the trouble is situated so high up in the intestine that the passage of a rectal tube, enemata, etc., give but temporary relief. Doses of pituitrin have proved beneficial and morphine, enough to make the patient as comfortable as possible for the time being. Usually after the patient has had his cathartic and, on the third or fourth day, has resumed a light diet, the trouble disappears. Usually it is necessary to catheterize these cases for some days or they are incontinent. If incontinent, one should ascertain if the bladder is being emptied, as oftentimes it is merely an overflow.

Cystitis frequently develops, even with the greatest care in catheterization, but usually clears up on bladder irrigations of saturated solution of boric acid followed by two drams of argyrol, 10 to 20 per cent., left in the bladder. Urotropin is given, not only for its effect on the urinary tract which is depressed and irritated by the action of ether, but for its supposed antiseptic property in the cerebro-spinal fluid. High colonic irrigations have been found beneficial for incontinence of feces. There is a dressing and removal of sutures in about ten days after operation. Spinal cord cases are rarely out of bed before the end of the second or third week.

General Preparation of Patient for Brain Operation: A cathartic is given at bedtime, an enema in the morning, light breakfast of toast and coffee if the operation is to be performed in the afternoon; if earlier, no breakfast.

Local Preparation: Shaving of entire head for male patient; for female, only the area of operation as designated by the surgeon. Frequently, if the patient is much worried about the surgical procedure, the shaving is done in the operating room while he is under ether. When he has been placed on the operation table, the area of operation is scrubbed with alcohol, ether, and painted with iodine. Ordinarily these cases take a small amount of ether due, not only to the shock of removal of bone but to pressure within the skull, so that one rarely has the prolonged nausea following, that one would ordinarily expect after operation.

Dressing on Brain Cases: We usually reinforce the usual compresses, gauze roller, and bandage, with a starch bandage which is put on wet and as it dries shrinks considerably, exerting some pressure and keeping the dressings intact. We have found this very practical, especially with restless cases and with patients who did not have special nurses and were likely to try and remove the dressings during delirium.

Removal from Operation Room: The patient is wrapped in hot blankets, removed to the ward and placed in bed with at least two pillows under the head, the upper pillow being protected by a rubber pillow slip. If there is evidence of considerable oozing from the wound, we use more pillows or elevate the head of the bed with shock blocks. The room is kept warm, with ventilation to ensure a sufficient supply of fresh air, and with the bed screened from all possible draughts. Hot water bottles are *never* used. Blankets are heated at intervals and are changed, should the patient show evidence of shock. A Murphy drip of normal saline, per rectum, at a temperature of 110 degrees is given very slowly until the condition improves. Pulse and respiration should be watched very carefully. Symptoms of a bleeding vessel within the skull which will only rise to serious symptoms in the course of hours, when the surgeon may be absent, should be watched for closely and immediately reported, as surgical procedure may be necessary. In this case the drowsiness and stupor gradually deepen into coma, the patient cannot be roused by shaking or speaking loudly to him, touching the cornea does not produce defensive winking, his breathing becomes stertorous and accompanied by puffing of the cheeks on each expiration, his temperature rises and the pulse is slow and bounding. If symptoms persist, it will soon be noticed that there is a paralysis of arm or leg.

The recognition and recording of new symptoms is essential; any slight twitchings of the face, fingers, limbs, may mean much to the surgeon in locating the trouble; convulsions, the onset, first twitchings noticed in corner of mouth or eye or finger, as the case may be, the spread of the convulsions to other parts of the body, whether the patient was conscious or not during the attack, or incontinent; any paralysis, facial or otherwise, ptosis of the eye or bulging of an eyeball.

Perhaps in no branch of medicine can a nurse be so helpful to a physician as in the care of brain cases. I want to impress upon my readers the absolute necessity of observing carefully each patient, in order that no transient incident of the illness may be lost to the physician in charge. Be no longer automatons, "mere makers of beds and dispensers of drugs," but active allies of the medical profession, keenly alive to the changes taking place in your patients. The clue in any case may be a fleeting description, a temporary weakness in a limb, a slight convulsion, a sensation of tingling in the hand or foot, a blurring of vision, a transient diplopia, a change in the mental state, irrelevant remarks, etc. These apparently insignificant things must be recorded and reported. Unless you are alive to their vital importance you may give scant attention and fail to describe them at all or do so in such a manner as to nullify the value of the report. State *facts* and not conclusions or inferences. A paralyzed limb is usually flaccid at first but later becomes stiff, and the forced immobility of the great joints frequently results in the formation of secondary adhesions which constitute one of the greatest barriers to the patient's recovery. To guard against these, the nurses should make a practice of carrying out passive movements on all joints of the affected side, for fifteen minutes, three times daily.

Post-operative care of trigeminal neuralgia cases is the same as in any other brain operation, with the exception that the eye on the affected side is covered with a shield for two weeks. We use the simple vaccination shield for this purpose and find it quite satisfactory. This can be removed and the eye carefully washed with boric acid.

Drugs Given: One has to be extremely careful in the administration of morphine, especially either following or preceding operations on the cerebellum, tumors in the pontine angle or high cervical cord, on account of possible interference with or depression of the respiratory centre. Atropin should always be given with morphine, if necessary to use even a very small dose. Urotropin is given as a routine measure. Catheterization is not often necessary after the first day or two. A cathartic is given about the third day, and the patient is put on soft diet, if there is no elevation of temperature. Light diet may be resumed two days later, and the patient is allowed to sit up in bed by the end of the first week. The wound is dressed and sutures removed, on the sixth or seventh day.

STATE EXAMINATIONS[1]

BY GRACE H. CAMERON, R.N.

To most of us examinations have always meant a mental and nervous strain, which often reached such proportions that the effort to think connectedly was a lost hope. The students of to-day experience that same feeling of helpless despair. Why is this a fearful thing? College students are nervous over examinations, but in a different way—they seem to fear they may not do their absolute best, rather than fear failure. Why is there, speaking in general terms, this difference?

It would seem that in nursing work, in three years' time, with daily practical application of all studies, with a routine that has become almost mechanical, there would be less dread than in any other profession or trade.

We all know that nurse training schools have advanced in every way with a wonderful rapidity. The training of twenty years ago cannot in one little item be compared to the teaching of to-day, and

[1] Read at a meeting of the Rochester League of Nursing Education.